Liang Wang

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Education

Institution of Automation, Chinese Academy of Sciences **Beijing, China**

Ph.D. in Pattern Recognition and Intelligent Systems (selected for the PhD honors program) *2021 - 2026 (Expected)*

- Center for Research on Intelligent Perception and Computing (CRIPAC)
- Advisors: Prof. Liang Wang, Qiang Liu, and Shu Wu
- Research Interests: AI for Science, Graph Representation Learning, Data Mining

Tongji University **Shanghai, China**

B.Eng. in Software Engineering *2017 - 2021*

- GPA: 4.86/5.00 (Ranking 3/214, Top 1.4%)
- Honors and Awards: National Scholarship (Top 1%), Outstanding Graduate of Shanghai Province (Top 1%)

Selected Publications

Rethinking Graph Masked Autoencoders through Alignment and Uniformity

- Liang Wang*, Xiang Tao*, Qiang Liu, Shu Wu, Liang Wang
- *AAAI 2024*

DIVE: Subgraph Disagreement for Graph Out-of-Distribution Generalization

- Xin Sun, Liang Wang, Qiang Liu, Shu Wu, Zilei Wang, Liang Wang
- *KDD 2024*

GSLB: The Graph Structure Learning Benchmark

- Zhixun Li, Liang Wang, Xin Sun, Yifan Luo, Yanqiao Zhu, Dingshuo Chen, Yingtao Luo, Xiangxin Zhou, Qiang Liu, Shu Wu, Liang Wang, Jeffrey Xu Yu
- *NeurIPS 2023*

Bi-Level Graph Structure Learning for Next POI Recommendation

- Liang Wang, Shu Wu, Qiang Liu, Yanqiao Zhu, Xiang Tao, Mengdi Zhang, Liang Wang
- *IEEE Transactions on Knowledge and Data Engineering*

Semantic Evolvement Enhanced Graph Autoencoder for Rumor Detection

- Xiang Tao, Liang Wang, Qiang Liu, Shu Wu, Liang Wang
- *WWW 2024*

CAMLO: Cross-Attentive Multi-View Network for Long-Term Origin-Destination Flow Prediction

- Liang Wang, Hao Fu, Shu Wu, Qiang Liu, Xuelei Tan, Fangsheng Huang, Mengdi Zhang, Wei Wu
- *SDM 2024*

Enhancing Temporal Knowledge Graph Forecasting with Large Language Models via Chain-of-History Reasoning

- Yuwei Xia, Ding Wang, Qiang Liu, Liang Wang, Shu Wu, Xiaoyu Zhang
- *ACL 2024 (Findings)*

Personalized Interest Sustainability Modeling for Sequential POI Recommendation

- Zewen Long*, Liang Wang*, Qiang Liu, Shu Wu
- *CIKM 2023 (Short Paper))*

Selected Projects

PyGCL: A PyTorch Library for Graph Contrastive Learning **https://github.com/PyGCL/PyGCL**

- ☆ Github Star: 850
- An easy-to-use library for graph contrastive learning with PyTorch. It implements a wide variety of contrastive objectives, data augmentations, contrasting modes and other utilities useful for implementing and evaluating contrastive learning on graphs.

GSLB: A Benchmark of Graph Structure Learning **https://github.com/GSL-Benchmark/GSLB**

- ☆ Github Star: 95
- An open-source library built for easy implementation and evaluation of graph structure learning model family. It offers a versatile control of graph dataset laoding, structure learners, structure processors, and a bunch of reproduced models.

Internship

Graph Learning Group, NLP Center, Meituan Inc. **Beijing, China**
Research Intern *Sept. 2021 - Oct. 2022*

- Conducted research on graph self-supervised learning and graph-based spatial-temporal data mining. The research results have been published in IEEE TKDE and SDM 2024.

CRIPAC, Institution of Automation, Chinese Academy of Sciences **Beijing, China**
Research Intern *Feb. 2021 - Jun. 2021*

- Conducted research on dynamic graph structure learning for multivariate time series forecasting.

Advertising Department, ByteDance Inc. **Shanghai, China**
Machine Learning Engineer Intern *Jul. 2020 - Dec. 2020*

- Supported the improvement of advertising machine learning models, and the development of the advertising system.

Talks

Denoising-based 3D Molecular Pre-training, 2024, Slides
Generative Graph Self-Supervised Learning, 2023, Slides
Graph Transformers, 2022, Slides
Graph Self-Supervised Learning and Pre-Training, 2021, Slides

Academic Services

Conference Reviewers: KDD 2024, NeurIPS 2024

Technical Skills

Programming Languages: Python, C++, Matlab, Java, C#
Machine Learning Frameworks: PyTorch, PyTorch Geometric (PyG), Deep Graph Library (DGL)
Others: LaTeX, Git